Attorney Docket No.: US 1331/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : October 10, 2003

Sanjay KOTHA

Tirumalai S. SUDARSHAN

Serial No.: N/A :

Filed: Herewith :

For: METHOD AND KIT FOR INDUCING :

HYPOXIA IN TUMORS THROUGH THE USE OF A MAGNETIC FLUID :

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56 and 1.97-1.98, Applicants submit herewith copies of various references for the Examiner's consideration. The Examiner is respectfully requested to review and officially consider and make the references of record before issuing the first Office Action in connection with this case.

A completed form 1449B/PTO listing the references thereon together with copies of same is enclosed herewith. (Pursuant to the PTO's Waiver signed by Deputy Commissioner Stephen G. Kunin on July 11, 2003, only the copies of the non-patent

literature are enclosed.) The Examiner is respectfully requested to return an initialed

copy of form1449B/PTO along with the next communication in connection with this

case.

It is believed that no fee is due for this submission. Should that determination be

incorrect, however, the Examiner is hereby authorized to charge any deficiencies, or

credit any overpayment, to our Deposit Account No. 01-0433, and notify the

undersigned in due course.

Should the Examiner have any questions or wish to discuss further this matter,

please contact the undersigned at the telephone number provided below.

Respectfully submitted,

DINESH AGARWAL Attorney for Applicant(s)

Reg. No. 31,809

Law Office - Dinesh Agarwal, P.C. 5350 Shawnee Road, Suite 330

Alexandria, Virginia 22312

Telephone: (703) 642-9400

Fax:

(703) 642-9402

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	APPLIC	CANT	•	First Named Inventor	Sanjay KOTHA et al.			
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Sheet	1	of	6	Attorney Docket Number	US 1331/02			

				U.S. PATENT DOCUME	NTS	
Examiner Initials'	Cite Number		Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		3,047,507		Winslow	07-31-1962	
		3,937,839		Strike et al.	02-10-1976	
		4,064,409		Redman	12-20-1977	
		4,106,488		Gordon	08-15-1978	
		4,107,288		Oppenheim et al.	08-15-1978	
	4,183,156	Rudy	01-15-1980			
		4,219,945		Rudy	09-02-1980	
		4,267,234		Rembaum	05-12-1981	
		4,268,413		Dabisch	05-19-1981	
		4,303,636		Gordon	12-01-1981	
		4,323,056		Borrelli et al.	04-06-1982	
		4,340,626		Rudy	07-20-1982	
***************************************		4,342,157		Gilbert	08-03-1982	***************************************
		4,443,430		Mattei et al.	04-17-1984	
		4,452,773		Molday	06-05-1984	
		4,454,234		Czerlinski	06-12-1984	
		4,472,890		Gilbert	09-25-1984	
		4,501,726		Schröder et al.	02-26-1985	
		4,545,368		Rand et al.	10-08-1985	
		4,554,088		Whitehead et al.	11-19-1985	

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		4,574,782		Borrelli et al.	03-11-1986		
	<u></u>	4,613,304		Meyer	09-23-1986		
		4,628,037		Chagnon et al.	12-09-1986		
		4,637,394		Racz et al.	01-20-1987		
		4,662,359		Gordon	05-05-1987		
		4,672,040		Josephson	06-09-1987		
		4,695,392		Whitehead et al.	09-22-1987		
		4,695,393		Whitehead et al.	09-22-1987		
		4,721,618		Giles et al.	01-26-1988		
		4,992,190		Shtarkman	02-12-1991	***************************************	
		4,999,188		Solodovnik et al.	03-12-1991		
***************************************		5,067,952		Gudov et al.	11-26-1991		
		5,108,359		Granov et al.	04-28-1992		
		5,161,776		Nicholson	11-10-1992		
		5,180,583		Hedner	01-19-1993		
		5,202,352		Okada et al.	04-13-1993		
		5,207,675		Canady	05-04-1993		
		5,236,410		Granov et al.	08-17-1993		
		5,354,488		Shtarkman et al.	10-11-1994		
		5,358,659		Ziolo	10-25-1994	Hillian III	

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		5,374,246		Ray	12-20-1994	
		5,427,767		Kresse et al.	06-27-1995	
		5,466,609		Siiman et al.	11-14-1995	
		5,493,792		Bates et al	02-27-1996	
		5,507,744		Tay et al.	04-16-1996	
		5,525,249		Kordonsky et al.	06-11-1996	
		5,549,837		Ginder et al.	08-27-1996	
		5,565,215		Gref et al.	10-15-1996	
~~~~		5,582,425		Skanberg et al.	12-10-1996	
		5,595,735		Saferstein et al.	01-21-1997	
***************************************		5,597,531		Liberti et al.	01-28-1997	
		5,624,685		Takahashi et al.	04-29-1997	——————————————————————————————————————
		5,635,162		Fischer	06-03-1997	
		5,635,215		Boschetti et al.	06-03-1997	
		5,645,849		Pruss et al.	07-08-1997	
···		5,646,185		Giaccia et al.	07-08-1997	
		5,667,715		Foister	09-16-1997	
		5,670,078		Ziolo	09-23-1997	
		5,695,480		Evans et al.	12-09-1997	
		5,702,630		Sasaki et al.	12-30-1997	

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	U.S. PATENT DOCUMENTS								
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		5,707,078		Swanberg et al.	01-13-1998				
	<u></u>	5,714,829		Guruprasad	02-23-1998				
	<u></u>	5,782,954		Luk	07-21-1998				
		5,800,372		Bell et al.	09-01-1998				
		5,900,184		Weiss et al.	05-04-1999				
		5,927,753		Faigle et al.	07-27-1999				
		5,947,514		Keller et al.	09-07-1999				
		6,027,664		Weiss et al.	02-22-2000				
		6,036,226		Brown et al.	03-14-2000				
		6,036,955		Thorpe et al.	03-14-2000				
		6,039,347		Maynard	03-21-2000				
		6,044,866		Rohrbeck	04-04-2000				
		6,051,607		Greff	04-18-2000				
		6,076,852		Faigle	06-20-2000				
		6,096,021		Helm et al.	08-01-2000				
		6,149,576		Gray et al.	11-21-2000				
		6,149,832		Foister	11-21-2000				
		6,167,313		Gray et al.	12-26-2000				
		6,186,176 B1		Gelbmann	02-13-2001				
		6,189,538 B1		Thorpe	02-20-2001				

	FOREIGN PATENT DOCUMENTS											
Examiner Initials'	Cite	Foreign P	atent Docu	ment	Name of Patentee or	Date of Publication of	Pages, Columns, Lines,					
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		6,266,897 E	31	Seydel et al.	07-31-2001			
		6,274,121 E	31	Pilgrimm	08-14-2001			
		6,299,619 E	31	Greene, Jr. et al.	10-09-2001			
		6,315,709 E	31	Garibaldi et al.	11-13-2001			
		6,335,384 E	31	Evans et al.	01-01-2002			
6,355,275 B1		Klein	03-12-2002					
	6,399,317 B1		Weimer	06-04-2002				
		6,409,851 E	31	Sethuram et al.	06-25-2002			
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Sheet	6	of	6	Attorney Docket Number	US 1331/02			

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials'	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the Item (book), magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), Publisher, country, where published, source.	T²
		U.S. Published Patent Application No. US 2001/0016210 A1, Mathiowitz et al., Aug. 23, 2001.	
		U.S. Published Patent Application No. US 2001/0033384 A1, Luo et al., Oct. 25, 2001.	
		U.S. Published Patent Application No. US 2002/0045045 A1, Adams et al., Apr. 18, 2002	
		Azuma, Y. et al. "Coating of ferric oxide particles with silica by hydrolysis of TEOS", Journal of the Ceramic Society of Japan, 100(5), 646-51 (Abstract) (May 1992).	
		Atarashi, T. et al. "Synthesis of ethylene-glycol-based magnetic fluid using silica-coated iron particle", Journal of Magnetism and Magnetic Materials, 201, 7-10 (1999).	
		Homola, A. M. et al., "Novel Magnetic Dispersions Using Silica Stabilized Particles", IEEE Transactions on Magnetics, 22 (5), 716-719 (September 1986).	
		Giri, A. et al. "AC Magnetic Properties of Compacted FeCo Nanocomposites", Mater. Phys. and Mechanics, 1, 1-10 (2000).	
		Lubbe, AS et al. "Clinical experiences with magnetic drug targeting: a phase I study with 4' - expidoxorubicin in 14 patients with advanced solid tumors", Cancer Research, Vol. 56, Issue 20, 4686-4693 (Abstract) (1996).	
		Sako, M et al., "Embolotherapy of hepatomas using ferromagnetic microspheres, its clinical evaluation and the prospect of its use as a vehicle in chemoembolo-hyperthermic therapy", Gan to kagaku ryoho. Cancer & chemotherapy, Vol. 13, No. 4, Pt. 2, 1618-1624 (Abstract) (1986).	

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